Reimagining Higher Education:

Shifting Focus from Knowledge to Behavioral Development

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Let's go back in time

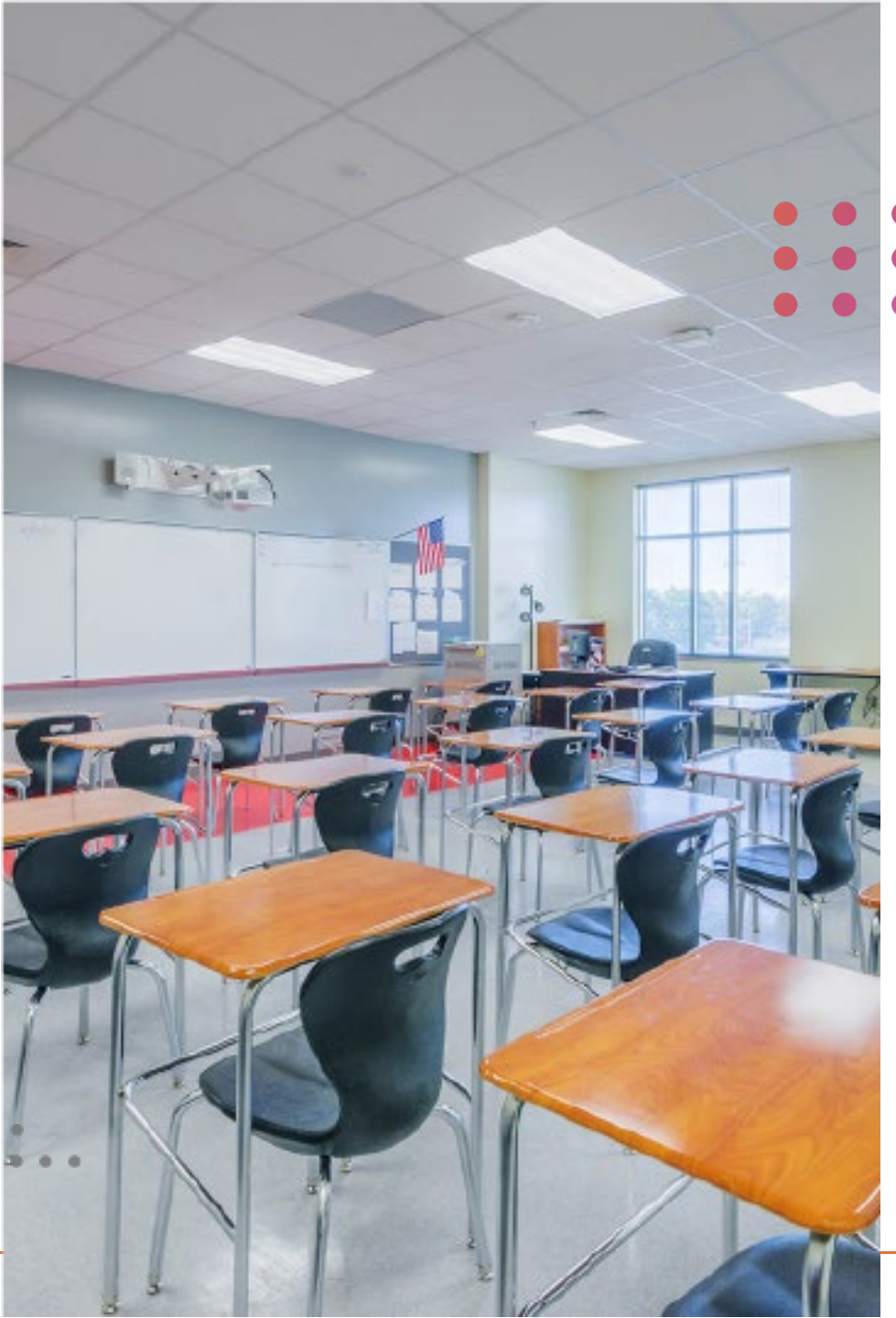
- Formal education in antiquity focused on Medicine, Astronomy, Math, and Engineering.
- Collapse of the Roman Empire
- During the Dark and Middle Ages, we focused on Theology first, then Engineering Law, Chemistry, and finally Medicine again.

Are our classrooms from the middle ages?

- In a way they are different, we re-introduced the Socratic method, introduced hands-on approaches, and developed the case study methodology.

- We greatly improved assessment and our classes are more entertaining.

BUT



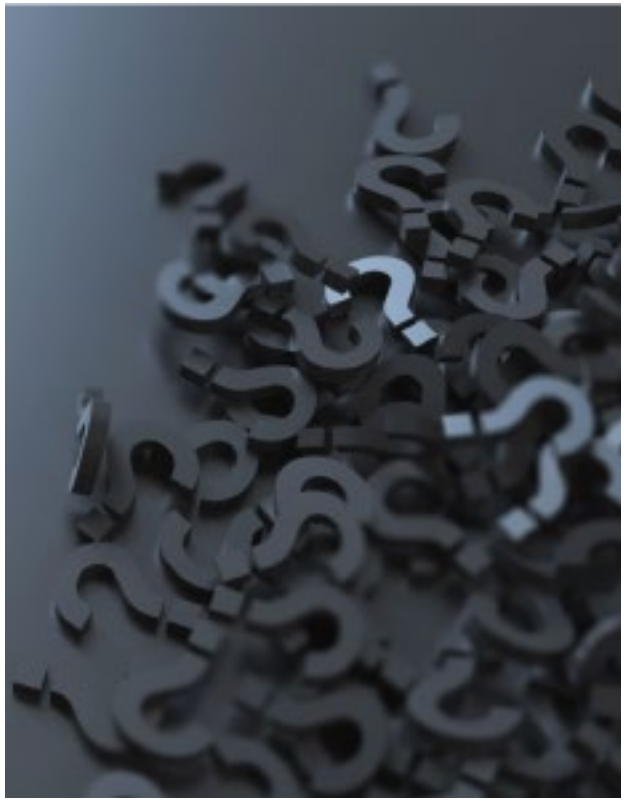
At a basic level, we use the same paradigm.

- There is some knowledge the students do not have. We facilitate them in acquiring that knowledge.

So what?

- The approach of knowledge transfer works very well for Medicine, Engineering, Math, Astronomy……

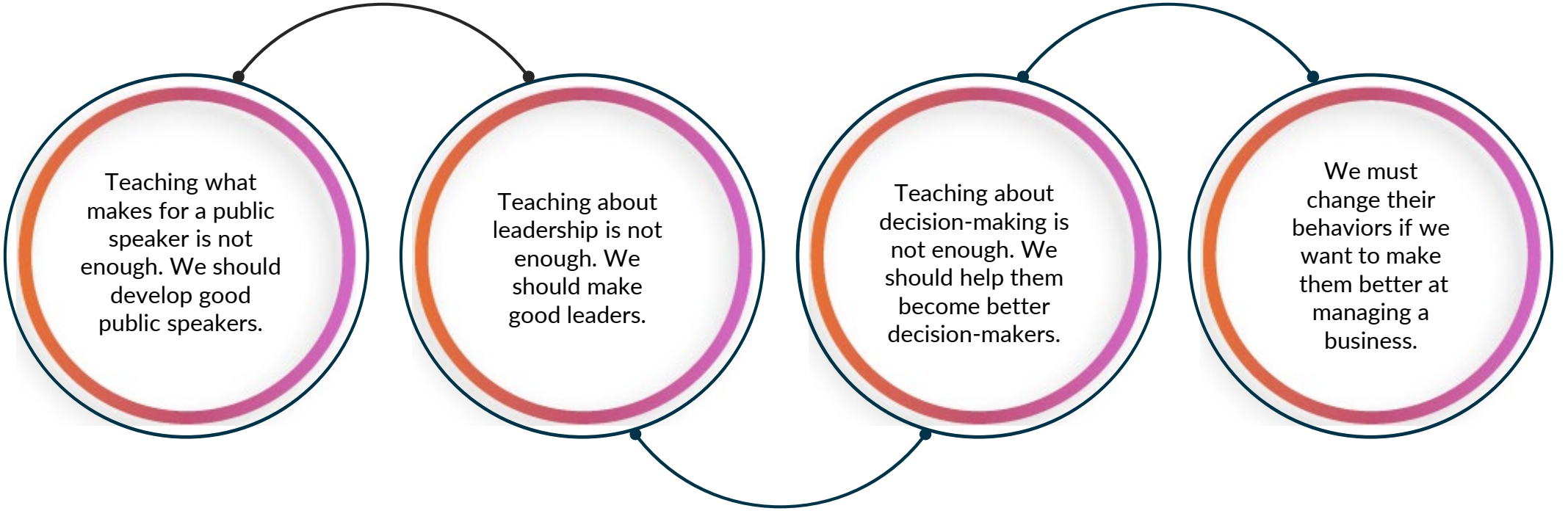
- In teaching the sciences:
  - The behavior of the scientist is irrelevant.
  - The load-bearing capacity of a bridge does not change with the tone of voice of the engineer
  - The attitude of the mathematician has no bearing on the equation.



Again, so what?

- Many aspects of business management are influenced by behavior.
- In some respects, you can have all the knowledge, but unless that knowledge is applied through behavioral change, that knowledge is useless.

Why is behavior important?



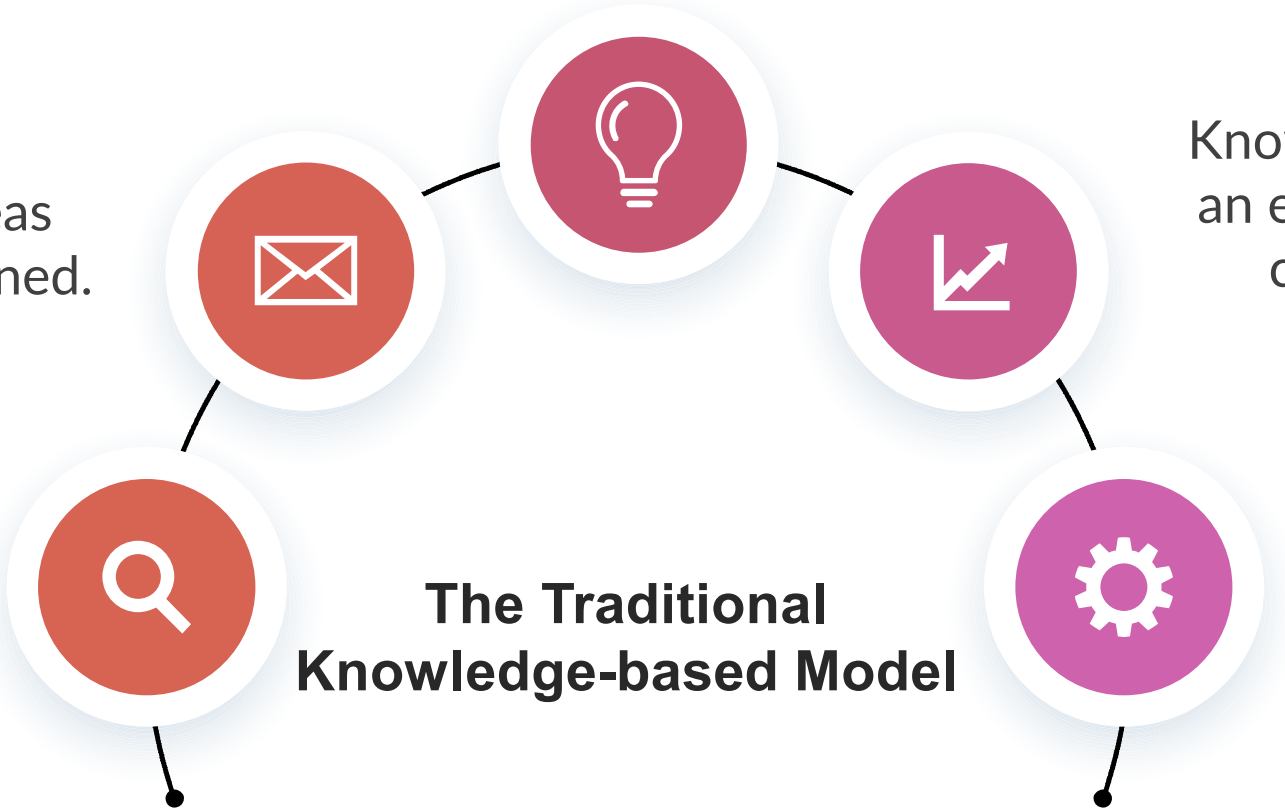
Classes split knowledge areas into manageable segments to be covered in a limited amount of time (seven weeks, 3 months, maybe even one year).

Knowledge areas are led by an expert with appropriate certifications in their knowledge base.

Students' knowledge is assessed and we move on.

In the traditional Knowledge-based Model:

Knowledge areas (classes) are defined.



The Traditional Knowledge-based Model

- That approach has worked for hundreds of years for many disciplines.
- But does it work for all disciplines?

- There are areas where behavior and attitude are as important, if not more important, than knowledge.

- Knowledge alone is important, but not sufficient.

- We can’t expect somebody with no education in medicine to be able to perform surgery.
- Somebody with no engineering degree should not oversee designing a bridge.

YET…

- None of the founders of the largest entrepreneurial success stories are graduates of entrepreneurship programs.
- Many of the most successful CEOs have backgrounds removed from business management.

Like...

Mathematics & Computer Science

English

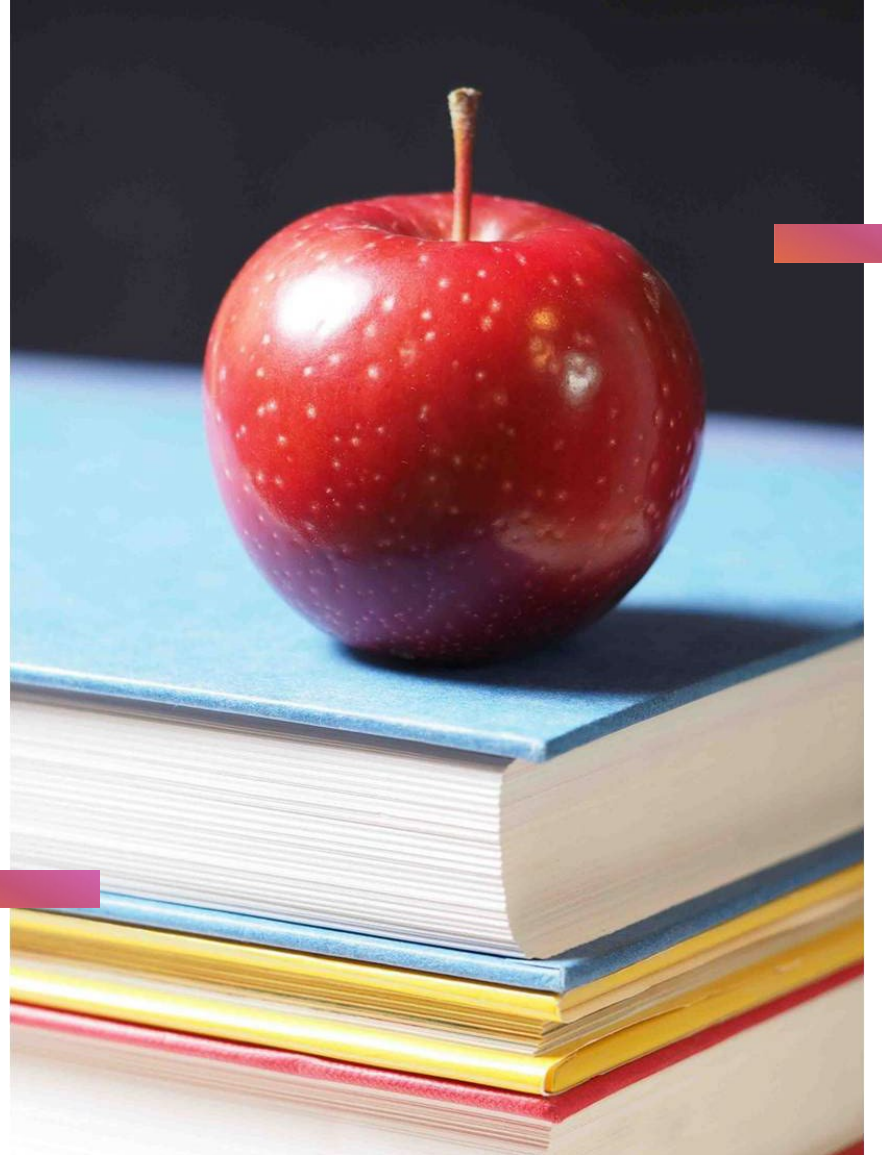
Physics

Computer Science & Psychology

- Who would want their surgery to be performed by somebody who started in the hospital in accounts receivable and by observation and on-the-job hands-on practice became head of surgery?

- That sort of thing happens a lot in management, what does it say about our education, that seems to be optional?
- And in many cases not a predictor of success at he highest levels.

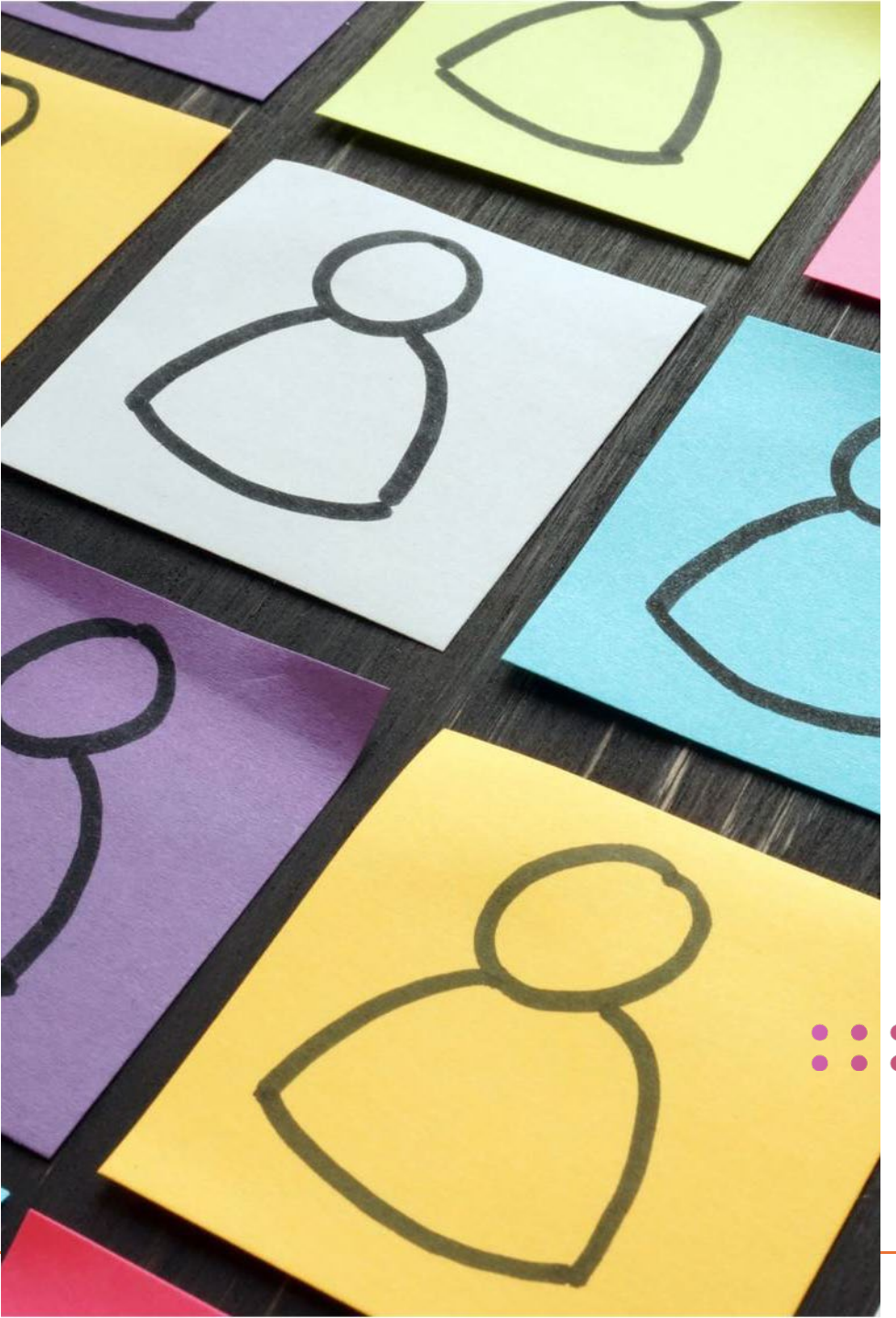
So, is it all about Behavior?



- No.
- Knowledge is important, but not the only thing.
- It is about incorporating other aspects, not replacing them.

Ok, so what do we do?

- Start from the ground up, think revolution, not evolution.
- List the activities a company does:
  - R&D, Marketing, Sales, Manufacturing.
- List activities managers do:
  - Leadership, Planning, Decision Making, Motivating, Public Speaking
- Determine for each
  - if knowledge of the area is enough or
  - if a behavior change is needed to succeed.



- For areas where knowledge is fundamental, **evolution is good.**
  - We should keep doing what we do, with incremental improvements.
- For areas where behavior change is fundamental, **we need a revolution!**

What do we know about behavior modification?

- At a very basic level, we know behavior does not change in a semester, much less in 4 hours per week during a semester.

- Behavior modification requires consistency.

Our system is designed around specific classes.

- How can we have a theme incorporated in every class, across four years? Who would lead it?

Can we ask every professor to now also include leadership, public speaking and demand a pro-active stance, and retain academic freedom?

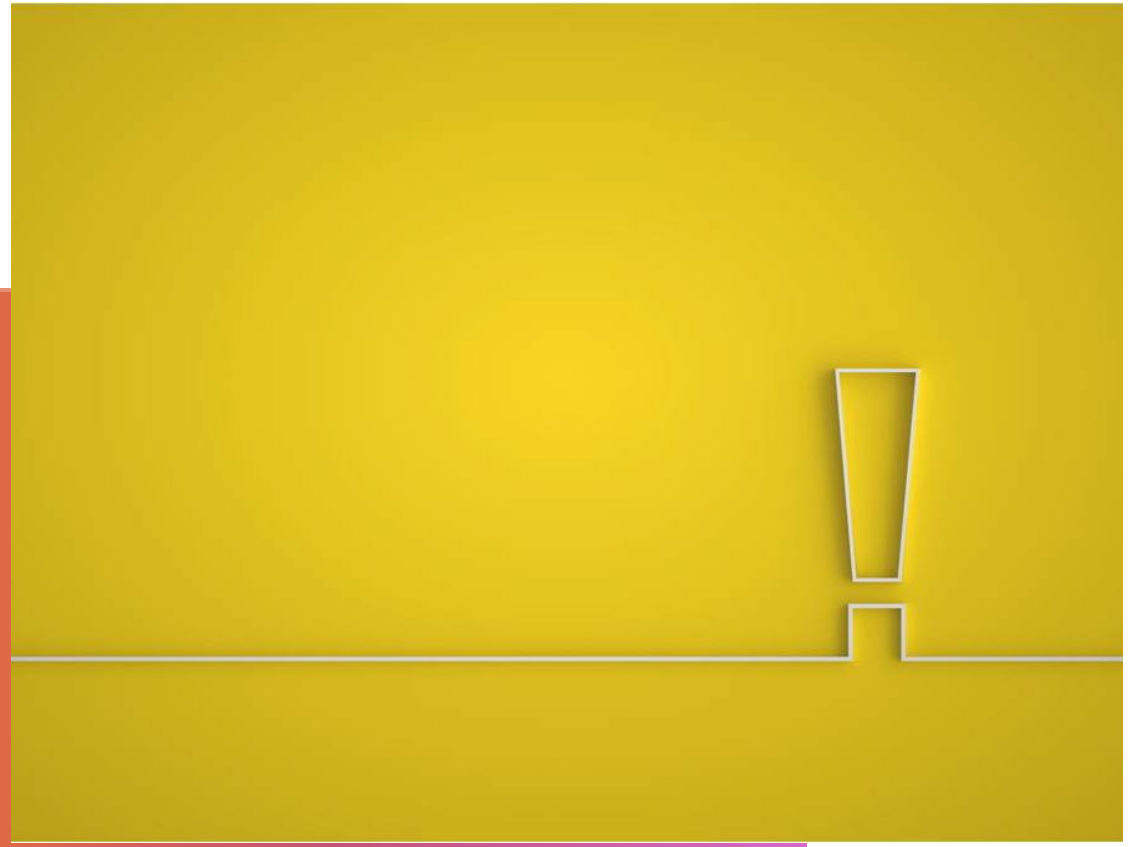
Again, what do we do?

There are a wide range of personal, social, and environmental factors that influence behavior. Most can be assigned to three levels:

- *Personal or individual:* beliefs, knowledge, attitudes, skills, genetics
- *Social:* interaction with other people including friends, family, and the community
- *Environmental:* the area in which an individual lives, e.g. school, workplace, local shops and facilities, and wider factors including the economy (such as prices) and technology.

Central Office of Information (COI) (2009). Communications and behavior change. London: COI.

Information and advice are not enough



- The traditional approach, relies on providing direct advice and information.
  - Still sometimes used in health consultations and media campaigns.
- Information is important for education and informing consumers but is rarely sufficient to change behavior.
  - Based on assumptions that
    - people lack knowledge of what they should be doing.
    - improving knowledge changes attitude, creating the desire to change.

Speller V (2007). The prevention paradox. Principles and practice of health promotion: health promotion models and theories, in HealthKnowledge Public Health Textbook, Public Health Action Support Team (PHAST).

Which behavior change techniques are most effective?

- It is not clear which techniques are effective under which conditions.
- Self-monitoring and other self-regulatory techniques (goal-setting, prompting, self-monitoring, providing feedback on performance, goal review) are reported as effective behavior change tools.

Greaves CJ, et al. (2011). A systematic review of reviews of intervention components associated with increased effectiveness in dietary and physical activity interventions. BMC Public Health 11:119.

World Cancer Research Fund (WCRF) (2009). Effective health behavior change strategies. Informed 35.

Michie S, et al. (2009). Effective techniques in healthy eating and physical activity interventions: a meta-regression. Health Psychology 28(6):690-701.

Self-determination theory

- Combining skill development with underlying, intrinsic motivation and reason, is believed to be essential for lasting change. Intrinsic motivation:
  - Does not rely on external pressure, like rewards, approval, punishment, or disapproval from peers or health professionals.
  - exists within the individual and is driven by interest or enjoyment in the task.
- This is the basis of the self-determination theory. Contrary to rewards and incentives:
  - self-driven motivation is believed to be stable and enduring.
  - individuals must believe the behavior is enjoyable or compatible with their 'sense of self', values, and life goals.

Teixeira PJ, et al. (2012). Motivation, self-determination, and long-term weight control IJBNPA 9:22

Teixeira PJ, et al. (2011). Why we eat what we eat: the role of autonomous motivation in eating behavior regulation. Nutrition Bulletin 36(1):102-107.

Motivational interviewing

Motivational interviewing is a counseling approach that combines behavior-change techniques and is more effective than traditional advice-giving.

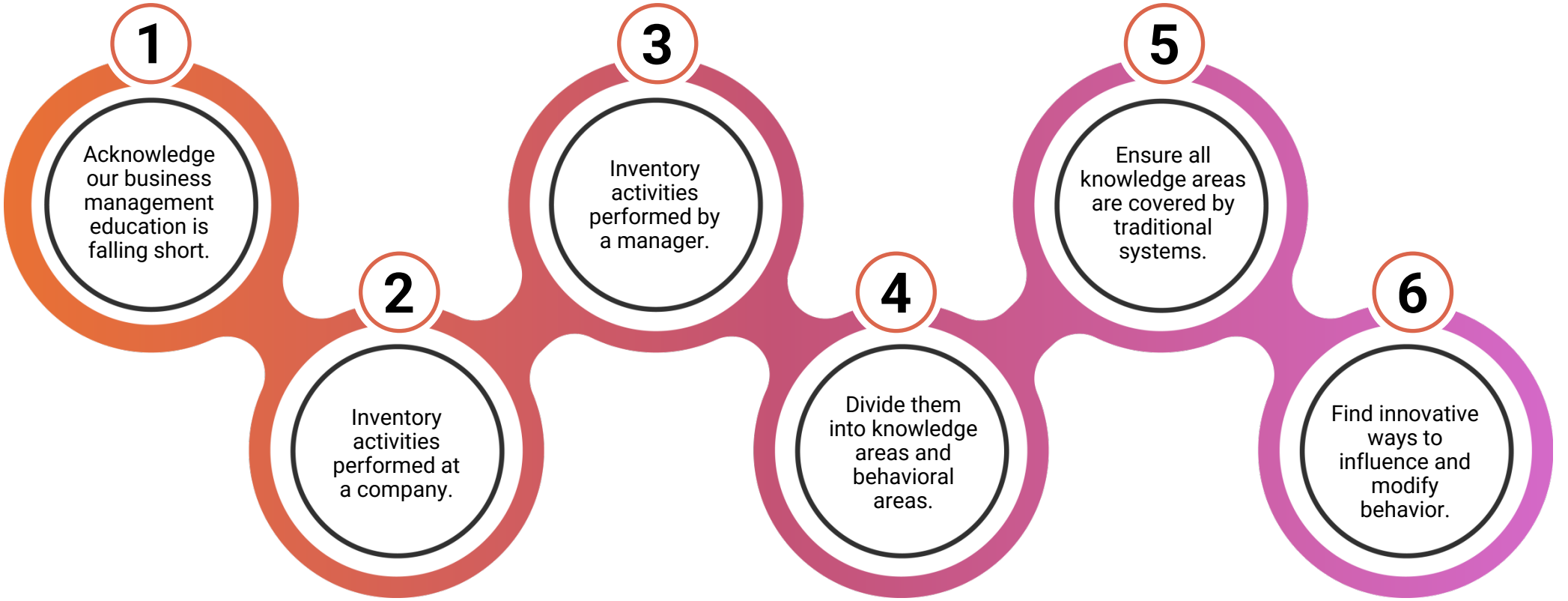
- Express empathy (through reflective listening)
- Develop discrepancy (between the individual's goals and their current behavior) and avoid argumentation.
- Roll with resistance (acknowledge and explore the individual's resistance to change, rather than opposing it).
- Support self-efficacy.

Nudging

- An approach drawn from behavioral economics that aims to ‘nudge’ people’s choices by making the healthier option easier, not by removing the less healthy ones.
  - Making salad the default side dish or making the stairs a more attractive choice than taking the elevator/lift.
  - Awareness of social norms by receiving feedback on their behavior compared to other people.

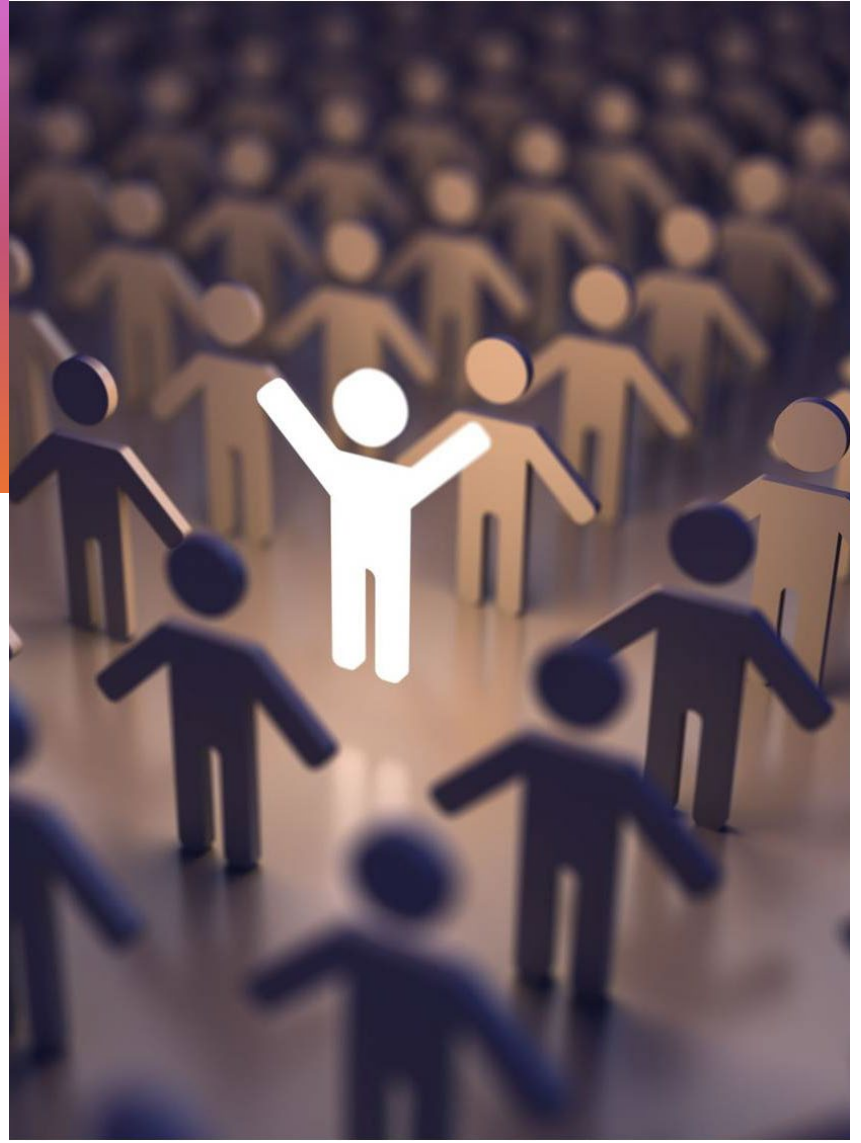
Thaler RH & Sunstein CR (2008). Nudge: improving decisions about health, wealth, and happiness. New Haven, CT & London: Yale University Press.

What is the path forward?



What are the barriers?

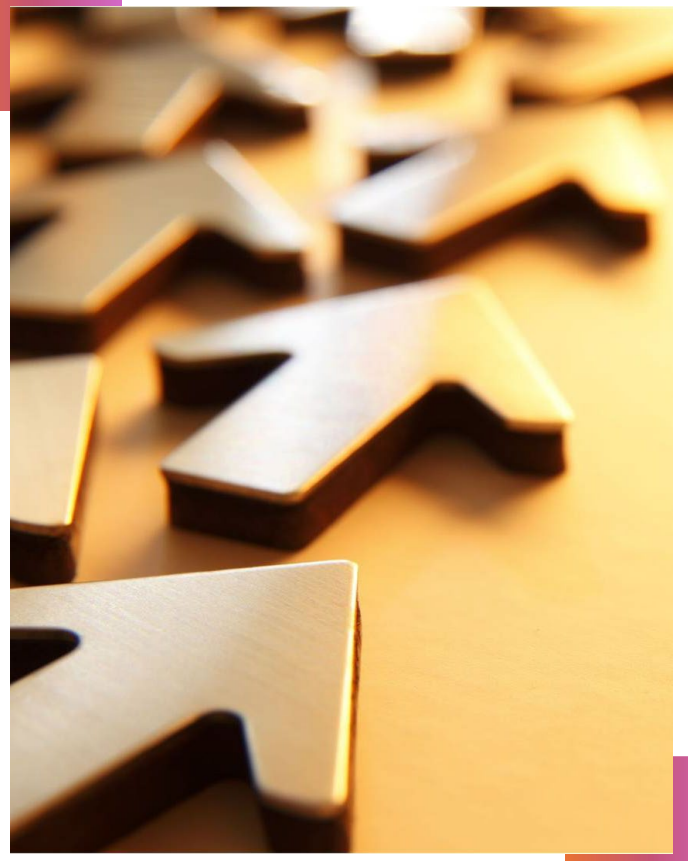
- Our system is:
  - built around knowledge transfer.
  - centered around discrete classes that give the students credits based on contact hours.
- Our faculty:
  - are paid based on those credits.
  - assess the students based on knowledge.
- If that system does not work for certain areas,
  - how would we handle pay for faculty?
  - how do we make it a requirement for students, when there are no credits involved?
  - how can accrediting bodies foster flexibility and promote this change?



And more importantly…

- Is it fair…
  - if not everybody will be a leader?
  - if not everybody will be a CEO or speak in public?
  - to assess the behavioral change of students?
    - assuming we figure out how to do it.

There are no easy answers



- None of these issues are easy to address
  - we **MUST** address them, discuss them, and research them, **NOW**.
- Society demands that we demonstrate a substantial improvement in the life outcomes of our students.